



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

RECEIVED

APR 03 1991

REML SECTION

DATE: APR 2 1991

MEMORANDUM

SUBJECT: Data Transmittal for Activity #: CS26R
Site Description: Missouri Electric Works
FROM: Andrea Jirka *[Signature]*
Chief, Laboratory Branch, ENSV
TO: Robert Morby
Chief, Superfund Branch, WSTM
ATTN: P. Franco-Isetto

Attached is the data transmittal for the above referenced site. These data have met all quality assurance requirements unless indicated otherwise in a data package. This should be considered a Partial or X Complete data transmittal (completes transmittal of). If you have any questions or comments, please contact Dee Simmons at 236-3881.

Attachments

cc: Data Files

MEW Site File
Break6_000719

MEW
MOD980965782
6.3 EPA

NOTE: Please see Mary Gerken, SPFD-WSTM, if you want an electronic copy of the data. #158427



S00153994
SUPERFUND RECORDS

RECYCLE
PAPER CONTAINS RECYCLED FIBERS

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTNO: CS26R SAMNC: 001 QCC: _ MEDIA: WATER PL: S P F D

ACTIVITY DES: MISSOURI ELECTRIC WORKS REF LATITUDE: _ _ _ _
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT: LONGITUDE: _ _ _ _

SAMPLE DES: _ _ _ _ _ DATE: 2/02/91 TIME: 11:01 FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 02705791 EAST: _ _ _ _
CASE/BATCH/SMD: _ _ _ / _ / _ LAB: _ _ _ _ END: 2/03/91 4:10 NORTH: _ _ _ _
STORET/SAROAD NO: _ _ _ _ _ DOWN: _ _ _ _

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2 VOA VIALS	ICED	WV	VOLATILES
GLASS	ICED	W24	PCB - G. BEEMONT

COMMENTS:

Volatiles (VOA vials) Depth 81'
~~PCBs (80 oz amber) 81'~~
PCBs (80 oz. amber) 81'

MEW Site File
Break6_000720

SAMPLE COLLECTED BY: John L. Smith

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
 ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 91 ACTNO: CS26R SAMNO: 002 OCC: MEDIA: WATER PL: S P F D

CTIVITY DES: MISSOURI ELECTRIC WORKS

REF LATITUDE: _____

LOCATION: CAPE GIRARDEAU

MO PROJECT NUM: A33 PT: LONGITUDE: _____

SAMPLE DES: _____

DATE ~~02/07/91~~ TIME FROM REF PT

LOCATION: CAPE GIRARDEAU

MO

BEG: 02/05/91 13:45

EAST: _____

ASE/BATCH/SNO: _____

LAB: _____

END: _____

NORTH: _____

TOROT/SAROAD NO: _____

DOWN: _____

ANALYSIS REQUESTED:

CONTAINER

PRESERVATIVE

MGP

NAME

VOA VIALS

ICED

WV

VOLATILES

GLASS

ICED

W24

PCB - G. BEEMONT

COMMENTS:

SAMPLE COLLECTED BY :

[Signature]

MEW Site File
 Break6_000721

FY: 91 ACTNO: CS26R SAMNG: 005 QCC: F MEDIA: WATER PL: S P F D

ACTIVITY DES: MISSOURI ELECTRIC WORKS REF LATITUDE: _____
LOCATION: CAPE GIRARDEAU MO PROJECT NUM: A33 PT: LONGITUDE: _____

SAMPLE DES: BLANK DATE TIME FROM REF PT
LOCATION: CAPE GIRARDEAU MO BEG: 02/05/91 __:__ EAST: ____
CASE/BATCH/SMC: ____/____/____ LAB: ____ END: ____/____/____ NORTH: ____
STORET/SARDAD NO: _____ DOWN: _____

ANALYSIS REQUESTED:
CONTAINER PRESERVATIVE MGP NAME
2 VOA VIALS ICED WV VOLATILES

COMMENTS:

SAMPLE COLLECTED BY : 

MEW Site File
Break6_000722

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTNO: CS26R SAMNO: 006 QCC: F MEDIA: WATER PL: S P F D

ACTIVITY DES: MISSOURI ELECTRIC WORKS

REF LATITUDE: _ _ _

LOCATION: CAPE GIRARDEAU

MO PROJECT NUM: A33 PT: LONGITUDE: _ _ _

SAMPLE DES: BLANK

DATE TIME FROM REF PT

LOCATION: CAPE GIRARDEAU

MO

BEG: 02/05/91 _ : _ EAST: _ _ _

CASE/BATCH/SNO: _ / _ / _

LAB: _ _ _

END: _ / _ / _ : _ NORTH: _ _ _

STORET/SAROAD NO: _ _ _ _ _

DOWN: _ _ _ _

ANALYSIS REQUESTED:

CONTAINER

PRESERVATIVE

MGP

NAME

GLASS

ICED

W24

PCB - G. BEEMONT

COMMENTS:

MEW Site File
Break6_000723

SAMPLE COLLECTED BY : Todd Beemont

10/2/91

MEW Site File
Break6_000724

[illegible]

MEW Site File
Break6_000725

ENVIRONMENTAL SERVICES ASSISTANCE TEAM -- ZONE II

ICF Technology Incorporated

ESAT Region VII
ManTech Env. Tech., Inc.
25 Funston Road
Kansas City, KS 66115
(913) 236-3881

ManTech Environmental Technology, Inc.

The Bionetics Corp.

TO: Larry Marchin/Barry Evans
Data Review Task Monitor

THRU: Harold Brown, Ph.D.
ESAT Deputy Project Officer, EPA

FROM: Shirley L. Williams *SW Re*
ESAT Data Reviewer

THRU: Ronald Ross
ESAT Manager

DATE: March 28, 1991

SUBJECT: Review of organic data for MO Electric Works.

TID# 07-9009-509
ASSIGNMENT# 744
ICF ACCT# 302-26-509-02
ManTech S.O.# 1073-509
ESAT Document No. ESAT-VII-509-0130

These data were reviewed primarily according to the "Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses," February 1988 revision with changes given in the Region VII Organic Data Review Training Manual and EPA memorandums.

The following comments and attached data sheets are a result of the ESAT review, according to EPA policies, of the following data from the contract laboratory.

CASE NO.: 15854
SITE: MO Electric Works
REVIEWER: Shirley L. Williams

LABORATORY: ARI
METHOD NO.: CS0288A
EPA ACTIVITY NO.: CS26R
MATRIX: Water

VOA

PCB

<u>SMO Sample No.</u>	<u>EPA Sample No.</u>	<u>SMO Sample No.</u>	<u>EPA Sample No.</u>
GK939	CS26R001	GK939	CS26R001
GK940	CS26R005F	GK941	CS26R006F
GK942	CS26R002	GK942	CS26R002
GK943	CS26R900P		

MEW Site File
Break6_000726

GENERAL

This data review assignment covers four water samples analyzed for VOAs and three for PCBs. Two field blanks, no field duplicates, one PE sample, and nine QC samples were included in this assignment.

1. Holding Times and Preservation

A. The holding time requirements for all samples except CS26R001 for PCBs were met for both fractions. CS26R001 was out by one day. No data were qualified.

B. Extraction to analysis holding time criteria were met for all the PCB samples.

2. GC/MS Tuning

A. GC/MS tuning criteria were met for all samples.

3. Initial Calibration

A. Mean RRF for all analytes was within control limits for all fractions.

B. Percent RSD for all analytes was within control limits.

4. Continuing Calibration

A. RRF50 values for all analytes were within control limits on all fractions.

B. Percent D was outside control limits for 2-butanone for the VOA calibration, and g-chlordane in individual standard B on the quantitation column for pesticides/PCB calibration. No data were qualified, as all these compounds were non-detect.

5. Matrix Spike / Matrix Spike Duplicate

A.	VOA	0 out of 5 RPD out of limits 0 out of 10 spike % recoveries outside limits
B.	Pesticides/ PCB	0 out of 0 RPD out of limits 0 out of 6 spike % recoveries outside limits (for MS only)

(No MSD was analyzed for PCBs per instructions from SMO.)

No data were qualified.

6. Pesticides Calibration

A. In the Evaluation Check for Linearity, percent RSD was less than 10% for all calibration runs. No data were qualified.

B. All standards were analyzed within a 72-hr sequence.

C. Percent D was within control limits for calibration for all analytes.

No data were qualified.

(Pesticide calibration is routinely used for pesticides/PCB determinations. Pesticides were not requested for any of the environmental samples, therefore QC results for the pesticides calibration performed were not reported to LAST. That data was used, however, for the evaluation presented in this section.)

7. Method Blanks / Field Blanks

A. VOA-Methylene chloride was found in both method blanks. Methylene chloride and acetone were found in the field blank. Samples CS26R002 and CS26R900P were qualified for methylene chloride. Samples CS26R001, CS26R001S, CS26R001W, and CS26R002 were qualified for acetone. No other data were qualified.

B. Pesticides/PCB-No compounds were found in either of the blanks.

8. Internal Standard Response

A. All analytes were within quality control limits for both fractions.

9. Surrogates

A. Surrogate recovery was within control limits for both the VOA and pesticides/PCB fractions.

10. Quantitation

In a level two review, calculations from raw data are not performed.

11. Pesticide Instrument Performance

A. DDT retention time was greater than twelve minutes.

B. Retention time windows were reported for all analytes.

C. Percent breakdown for 4,4'-DDT and endrin did not exceed 20%.

D. Percent D was less than or equal to the 0.3% criteria for the retention time shift on a capillary column.

12. Performance Evaluation Sample

The PE sample analysis was not in good agreement with the record of that sample, but was in very good agreement with in-house analyses of that same PE sample (see table below). Therefore, there is no reason to suspect that there is any problem with the data reported in this package.

<u>Analyte</u>	<u>True</u>	<u>Data Package</u>	<u>In-house</u>
1,1-Dichloroethane	4.4	5.0	5.1
Chloroform	11	12	12
1,1,1-Trichloroethane	5.0	6.0	4.9
Bromodichloromethane	4.4	5.0 U	5.0 U
cis-1,3-Dichloropropene	8.2	1.0	1.2
trans-1,3-Dichloropropene	8.2	0.8	1.3
Bromoform	10	5.0 U	5.0 U
Tetrachloroethene	4.0	3.0	4.0

13. Summary

Data in this package was qualified by the blank rule. This data package is acceptable in terms of requirements for accuracy, precision and completeness as described in the "Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses."

ANALYSIS REQUEST REPORT

VALIDATED DATA

FOR ACTIVITY: CS26R

S P F D

04/02/91 15:38:31

* FINAL REPORT

FY: 91 ACTIVITY: CS26R DESCRIPTION: MISSOURI ELECTRIC WORKS LOCATION: CAPE GIRARDEAU MISSOURI
STATUS: ACTIVE TYPE: SAMPLING - IN HOUSE ANALYSIS PROJECT: A33
LABO DUE DATE IS 3/24/91. REPORT DUE DATE IS 4/8/91.
INSPECTION DATE: 2/7/91 ALL DATA APPROVED BY LABO DATE: 04/02/91 FINAL REPORT TRANSMITTED DATE: 04/02/91
EXPECTED LABO TURNAROUND TIME IS 45 DAYS EXPECTED REPORT TURNAROUND TIME IS 60 DAYS
ACTUAL LABO TURNAROUND TIME IS 54 DAYS ACTUAL REPORT TURNAROUND TIME IS 54 DAYS

SAMP. NO.	QCC	M	DESCRIPTION	SAMPLE #	CONT.	CITY	STATE	AIRS/STOR/LOC NO	BEG. DATE	BEG. TIME	END. DATE	END. TIME
001	W	MO.	ELECTRIC WORKS	1	2	CAPE GIRARDEAU	MISSOURI		02/03/91	11:01	02/03/91	11:10
002	W	MO.	ELECTRIC WORKS-WATER SAMPLE	1	2	CAPE GIRARDEAU	MISSOURI		02/06/91	13:45		
005	F	MO.	ELECTRIC WORKS-BLANK SAMPLE	1	1	CAPE GIRARDEAU	MISSOURI		02/05/91			
006	F	MO.	ELECTRIC WORKS-BLANK SAMPLE	1	1	CAPE GIRARDEAU	MISSOURI		02/05/91			

TABLE OF CODES

VALIDATED DATA

SAMP. NO.	=	SAMPLE IDENTIFICATION NUMBER
OCC	=	QUALITY CONTROL SAMPLE/AUDIT CODE
M	=	MEDIA OF SAMPLE (A=AIR, T=TISSUE, H=HAZARDOUS MATERIAL, S=SEDIMENT/SOIL, W=WATER)
AIRS/STORET LOC. NO.	=	A SAMPLING SITE LOCATION
	=	IDENTIFICATION SITE LOCATION
BEG. DATE	=	THE DATE SAMPLING WAS STARTED
BEG. TIME	=	THE TIME SAMPLING WAS STARTED
END. DATE	=	THE DATE SAMPLING WAS ENDED
END. TIME	=	THE TIME SAMPLING WAS STOPPED
A	=	RESERVED
B	=	RESERVED
PES	=	PESTICIDES BY CONTRACT
E	=	EXPLOSIVES BY CONTRACT
FLD	=	FIELD MEASUREMENTS BY EPA
G	=	MINERALS & DISSOLVED MATERIALS BY EPA
HER	=	HERBICIDES BY EPA
I	=	ION CHROMATOGRAPHY ANALYSES BY EPA
MC	=	METALS BY CONTRACT
BNC	=	BASE NEUTRALS BY CONTRACT
L	=	FISH PHYSICAL DATA BY EPA
MET	=	METALS BY EPA
N	=	FISH TISSUE PARAMETERS BY EPA
VC	=	VOLATILES BY CONTRACT
P	=	PESTICIDES BY EPA
Q	=	FLASH POINT ANALYSES BY EPA
R	=	RESERVED
BN	=	SEMIVOLATILE BY EPA
T	=	CYANIDE PHENOL BY EPA
U	=	RESERVED
VOA	=	VOLATILE ORGANICS BY EPA
HC	=	HERBICIDES BY CONTRACT
X	=	RESERVED
Y	=	RESERVED
TRK	=	ACTIVITY TRACKING PARAMETERS BY EPA
	=	TRACKING PARAMETERS BY EPA
	=	STORET DETECTION IDENTIFIERS
	=	BLANK = NO REMARKS
J	=	DATA REPORTED BUT NOT VALID BY APPROVED QC PROCEDURES
I	=	INVALID SAMPLE/DATA -- VALUE NOT REPORTED
U	=	LESS THAN (MEASUREMENT DETECTION LIMIT)
M	=	DETECTED BUT BELOW THE LEVEL FOR ACCURATE QUANTIFICATION
D	=	PARAMETER NOT ANALYZED
CONTRACTOR/ IN HOUSE	/	FIELD MEDIA GROUPS
FIELD	=	* * * = AF, HF, SF, TF, WF, ZZ
CONTRACTOR	=	* * * = HA, HC, HJ, HK, HO, SC, SJ, SK, SO, SW, TC, TJ,
	=	TK, TO, TW, WA, WC, WE, WD, WK, WO, WW
IN HOUSE	=	* * * = ALL OTHERS

QUALITY CONTROL AUDIT CODES

A	=	TRUE VALUE FOR CALIBRATION STANDARD
B	=	CONCENTRATION RESULTING FROM DUPLICATE LAB SPIKE
C	=	MEASURED VALUE FOR CALIBRATION STANDARD
D	=	MEASURED VALUE FOR FIELD DUPLICATE
F	=	MEASURED VALUE FOR FIELD BLANK
G	=	MEASURED VALUE FOR METHOD STANDARD
H	=	TRUE VALUE FOR METHOD STANDARD
K	=	CONCENTRATION RESULTING FROM DUPLICATE FIELD SPIKE
L	=	MEASURED VALUE FOR LAB DUPLICATE
M	=	MEASURED VALUE FOR LAB BLANK
N	=	MEASURED VALUE FOR DUPLICATE FIELD SPIKE
P	=	MEASURED VALUE FOR PERFORMANCE STANDARD
R	=	CONCENTRATION RESULTING FROM LAB SPIKE
S	=	MEASURED VALUE FOR LAB SPIKE
T	=	TRUE VALUE OF PERFORMANCE STANDARD
W	=	MEASURED VALUE FOR DUPLICATE LAB SPIKE
Y	=	MEASURED VALUE FOR FIELD SPIKE
Z	=	CONCENTRATION RESULTING FROM FIELD SPIKE

MEDIA CODES

A	=	AIR
T	=	BIOLOGICAL (PLANT & ANIMAL) TISSUE
H	=	HAZARDOUS MATERIALS/MAN MADE PRODUCTS
S	=	SEDIMENT, SLUDGE & SOIL
W	=	WATER

UNITS

NA	=	NOT APPLICABLE
PG	=	PICOGRAMS (1 X 10 ⁻¹² GRAMS)
NG	=	NOANOGRAMS (1 X 10 ⁻⁹ GRAMS)
UG	=	MICROGRAMS (1 X 10 ⁻⁶ GRAMS)
MG	=	MILLIGRAMS (1 X 10 ⁻³ GRAMS)
M3	=	METER CUBED
MPH	=	MILES PER HOUR
SCM	=	STANDARD (1 ATM, 25 C) CUBIC METER
KG	=	KILOGRAM
L	=	LITER
C	=	CENTIGRADE DEGREES
SU	=	STANDARD (PH) UNITS
#	=	NUMBER
LB	=	POUNDS
IN	=	INCHES
M/F	=	MALE/FEMALE
M2	=	SQUARE METER
I.D.	=	SPECIES IDENTIFICATION
GPM	=	GALLONS PER MINUTE
CFS	=	CUBIC FEET PER SECOND
MGD	=	MILLION GALLONS PER DAY
1000G	=	FLOW, 1000 GALLONS PER COMPOSITE
UMHOS	=	CONDUCTIVITY UNITS (1/OHMS)
NTU	=	TURBIDITY UNITS
PC/L	=	PICO (1 X 10 ⁻¹²) CURRIES PER LITER
MV	=	MILLIVOLT
SO FT	=	SQUARE FEET
P/CM2	=	PICOGRAMS PER SQ. CENTIMETER
U/CM2	=	MICROGRAMS PER SQ. CENTIMETER

ANALYSIS REQUEST DETAIL REPORT				ACTIVITY: 1-CS26R		VALIDATED DATA	
COMPOUND	UNITS	001	002	005F	006F		
WP17 PCB-1016	UG/L	0.50	U	0.50	U	0.50	U
WP18 PCB-1221	UG/L	0.50	U	0.50	U	0.50	U
WP19 PCB-1232	UG/L	0.50	U	0.50	U	0.50	U
WP20 PCB-1242	UG/L	0.50	U	0.50	U	0.50	U
WP21 PCB-1248	UG/L	0.50	U	0.50	U	0.50	U
WP22 PCB-1254	UG/L	1.0	U	1.0	U	1.0	U
WP23 PCB-1260	UG/L	1.0	U	1.0	U	1.0	U
WV03 CHLOROMETHANE	UG/L	10	U	10	U		
WV04 BROMOMETHANE	UG/L	10	U	10	U		
WV05 VINYL CHLORIDE	UG/L	10	U	10	U		
WV06 CHLOROETHANE	UG/L	10	U	10	U		
WV07 METHYLENE CHLORIDE	UG/L	5.0	U	11	U	5.0	U
WV08 1,1-DICHLOROETHENE	UG/L	5.0	U	5.0	U	5.0	U
WV09 1,1-DICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0	U
WV10 1,2-DICHLOROETHENE, TOTAL	UG/L	6.0	5.0	U	5.0	U	
WV11 CHLOROFORM	UG/L	5.0	U	18	5.0	U	
WV12 1,2-DICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0	U
WV13 1,1,1-TRICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0	U
WV14 CARBON TETRACHLORIDE	UG/L	5.0	U	5.0	U	5.0	U
WV15 BROMODICHLOROMETHANE	UG/L	5.0	U	6.0	5.0	U	
WV16 1,2-DICHLOROPROPANE	UG/L	5.0	U	5.0	U	5.0	U
WV17 BENZENE	UG/L	5.0	U	5.0	U	5.0	U
WV19 TRICHLOROETHENE	UG/L	5.0	U	5.0	U	5.0	U
WV20 CIS-1,3-DICHLOROPROPENE	UG/L	5.0	U	5.0	U	5.0	U
WV21 DIBROMOCHLOROMETHANE	UG/L	5.0	U	5.0	U	5.0	U
WV22 1,1,2-TRICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0	U

ANALYSIS REQUEST DETAIL REPORT		ACTIVITY: 1-CS26R		VALIDATED DATA	
COMPOUND	UNITS	001	002	005F	006F
WV24 BROMOFORM	UG/L	5.0	U	5.0	U
WV25 TETRACHLOROETHENE	UG/L	5.0	U	5.0	U
WV26 TOLUENE	UG/L	5.0	U	5.0	U
WV27 1,1,2,2-TETRACHLOROETHANE	UG/L	5.0	U	5.0	U
WV28 CHLOROBENZENE	UG/L	40	5.0	U	5.0
WV29 ETHYL BENZENE	UG/L	5.0	U	5.0	U
WV30 ACETONE	UG/L	13	U	40	U
WV31 CARBON DISULFIDE	UG/L	5.0	U	5.0	U
WV32 2-BUTANONE	UG/L	10	U	10	U
WV33 VINYL ACETATE	UG/L	10	U	10	U
WV34 2-HEXANONE	UG/L	10	U	10	U
WV35 4-METHYL-2-PENTANONE	UG/L	10	U	10	U
WV36 STYRENE	UG/L	5.0	U	5.0	U
WV37 XYLENES, TOTAL	UG/L	5.0	U	5.0	U
WV40 TRANS-1,3-DICHLOROPROPENE	UG/L	5.0	U	5.0	U
ZZ01 SAMPLE NUMBER	NA	001	002	005	006
ZZ02 ACTIVITY CODE	NA	CS26R	CS26R	CS26R	CS26R

ACTIVITY CS26R MISSOURI ELECTRIC WORKS

THE PROJECT LEADER SHOULD CIRCLE ONE - STORET, AIRS, OR ARCHIVE.

CIRCLE ONE: STORET AIRS ARCHIVE

DATA APPROVED BY LABO FOR TRANSMISSION TO PROJECT LEADER ON 04/02/91 08:39:01 BY

